



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/664,332	09/18/2000	Noriya Hayashi	001195	4422
23850 7590 11/26/2010 KRATZ, QUINTOS & HANSON, LLP 1420 K Street, N.W. 4th Floor WASHINGTON, DC 20005				
EXAMINER				
SELLERS, ROBERT E				
ART UNIT		PAPER NUMBER		
1765				
MAIL DATE		DELIVERY MODE		
11/26/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/664,332

Applicant(s)

HAYASHI, NORIYA

Examiner

ROBERT SELLERS

Art Unit

1765

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 6-8, 10, 12, 22 and 27-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6-8, 10, 12, 22 and 27-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/C.3)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

This is responsive to the Request for Continued Examination and amendment filed November 5, 2010.

The text of section 103(a) of Title 35, U.S. Code not included in this action can be found in the non-Final rejection mailed April 24, 2002.

Claims 1, 2, 6-8, 10, 12, 22 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamazu et al. Patent No. 5,359,017; Buchwalter et al. Patent No. 5,879,859; Starkey Patent No. 5,384,339 and Green Patent No. 4,252,592

In view of Green et al. Patent No. 4,299,938.

The rejection is maintained for the reasons of record set forth in the previous Office actions, Particularly pages 3-6 of the Examiner's answer mailed December 21, 2005 affirmed by the Board of Patent Appeals and Interferences in the decision mailed May 11, 2010. The arguments filed November 5, 2010 have been considered but are unpersuasive.

1. The from 10% to 100% by weight (claims 1, 27 and 28) or from 50% to 80% by weight (new claim 29) as supported by page 50, lines 6-7 and 10-12 of the specification of a binary or higher system containing the photo-thermopolymerization initiator is interpreted as denoting the presence of the photo-thermopolymerization initiator in the aforementioned proportions within an initiator system that can contain two or more other initiators as apparently explained on page 19, line 17 to page 20, line 13.

2. Hamazu et al. discloses a calculated maximum proportion of 16.7% by weight (col. 3, lines 9-13, 20 parts by weight per 120 parts by weight of combined catalyst and stabilizer) of the elected species of benzyl-4-hydroxyphenylmethyl sulfonium hexafluoroantimonate (col. 3, lines 29-30 and the column 7 catalyst) and an iron-allene cationic polymerization catalyst.
3. Buchwalter et al. sets forth a photoinitiator such as a hydroxyaryl dialkyl sulfonium hexafluoroantimonate or hexafluorophosphate (col. 4, line 57 to col. 5) and a Lewis acid catalyst (col. 6, lines 50-59). Example 1 (col. 9) shows a calculated level of about 94.7% by weight of photoinitiator relative to the stannous octoate Lewis acid catalyst. It would have been obvious to reduce the level of photoinitiator to within the proportion range of claim 29 in order to optimize the polymerization of the diepoxide (col. 6, line 66 to col. 7, line 1).
4. Starkey reports from about 0.005 parts by weight to about 0.4 parts by weight of a sulfonic acid catalyst (col. 19, line 66 to col. 20, line 2) and from about 0.1 to 4 parts by weight (col. 13, lines 10-15) of a photoinitiator such as an aromatic sulfonium salt of a halogen-containing complex ion (col. 12, lines 35-36). The calculated content of photoinitiator within the binary system is from about 20% to about 99.9% by weight.

5. Green describes an aromatic sulphonium hexafluoroantimonate or hexafluorophosphate photopolymerization catalyst (col. 5, lines 49, 53 and 56-57) as 100% by weight of the initiator system. It would have been obvious to incorporate the Lewis acid catalyst of Buchwalter et al. or the sulfonic acid catalyst of Starkey wherein the photopolymerization catalyst of Green is present within the binary system proportion range of claim 29 in order to optimize the polymerization of the 3,4-epoxycyclohexylmethyl-3,4-epoxycyclohexane carboxylate.

(571) 272-1093 (Fax No. (571)-273-8300)
Monday to Friday, 9:30 to 6:00

/Robert Sellers/
Primary Examiner
Division 1765

rs
11/23/2010